

**REMARKS/ARGUMENTS**

Claims 1, 3-8 and 10-27 are pending in the above-referenced patent application and are currently under examination. Reconsideration is respectfully requested.

**I. REJECTION UNDER 35 U.S.C. § 102(b)**

Claims 1, 3-8, 10-19, 21-25 and 27 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Nakashima *et al.*, (EP 0 661 045). In response, Applicants respectfully traverse the rejection.

The Examiner alleges that Nakashima teaches a compression molded oral formulation having a core comprising a drug, along with solubilizers. The core is coated with a hydrogel comprising a hydrophilic base and hydrogel-forming polymers. Applicants respectfully disagree.

Nakashima et al. disclose a sustained release formulation that comprises a tablet containing a *single layer* comprising a drug, a hydrophilic base, and a hydrogel-forming polymer. The invention of Nakashima *et al.* relates to a hydrogel-type sustained-release preparation comprising (1) at least one drug, (2) an additive providing for a penetration of water into the core of the preparation, and (3) a hydrogel-forming polymer, which preparation undergoes *a substantially complete gelation* during its stay in the upper digestive tract such as the stomach and small intestine and is capable of releasing a drug in the colon. (please see page 2, lines 41-45).

In order to achieve the *substantially complete gelation*, Nakashima *et al.* teach a homogenous tablet with no distinguishing layers. The table comprises i) an active ingredient; ii) an additive (hydrophilic base); and iii) a hydrogel-forming polymer. The term *substantially complete gelation* as set forth on page 2, lines 46-47 preferably means not less than 80% of the preparation is gelled. The *substantially complete gelation* is achieved with a tablet as shown in the attached Exhibit 1B.

In contrast, the present invention relates to a tablet comprising a core and an outer layer (Exhibit 1A). Claim 1 sets forth:

1. A timed-release compression-coated solid composition for oral administration to a subject, said composition comprising:
  - a) a core tablet comprising a drug and a freely erodible filler, wherein said core tablet erodes approximately 40% to approximately 90% in the digestive tract of said subject;
  - b) an outer layer, wherein said outer layer is made from a hydrogel-forming polymer substance, and a hydrophilic base, wherein said hydrogel-forming polymer substance has a viscosity-average molecular weight of 2,000,000 or higher and/or a viscosity in an aqueous 1% solution (25° C) of 1,000 cp or higher, and said hydrophilic base having solubility such that the amount of water needed to dissolve 1g of said hydrophilic base is 5 mL or less; and
  - c) wherein the outer layer optionally contains another drug and the outer layer essentially does not contain the same drug as the core tablet drug.

In order for Nakashima *et al.* to anticipate the claim each every element must be present in the prior art reference.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Nakashima *et al.* do not teach a multi-layer tablet having both a core and an outer layer as is currently taught and claimed. Advantageously, the core erodes while protected by a hydrogel outer layer such that when the core is exposed to the lower digestive tract environment, the core is in substantially a solution state. As each and every element is not found in Nakashima *et al.*, the claim is not anticipated. Therefore, Applicants respectfully request that the Examiner withdraw the rejection.

## **II. REJECTION UNDER 35 U.S.C. § 103(a)**

The Examiner has maintained the rejection of claims 20 and 26 under 35 U.S.C. § 103(a) as allegedly being obvious over Nakashima *et al.*, combined with Taniguchi *et al.*, (EP 0709386). In response, Applicants respectfully traverse the rejection.

As discussed above, Nakashima *et al.* do not teach or suggest a multi-layer tablet as is presently taught and claimed. In order to achieve the *substantially complete gelation*, Nakashima *et al.* teach a tablet as shown in the attached Exhibit 1B.

The present invention provides a tablet having both a core and an outer layer as is shown in Exhibit 1A. In this regard, the Examiner's attention is respectfully directed to the Declaration by Hiromu Kondo an expert in the field of pharmacology in the previously submitted response (November 15, 2004). In paragraphs 4-5, Dr. Kondo generally explains the invention. As explained therein, in order to accomplish the collection and retention of water, as well as the fast delivery of the drug in the lower digestive tract, the present invention consists of a tablet having at least two layers. The outer layer consists of a hydrogel forming polymer and a hydrophilic base. The hydrophilic base acts to absorb water when the tablet is in the upper digestive tract, and the hydrogel forming polymer forms a hydrogel that retains the water as the tablet enters the lower digestive tract. The inner layer comprises a drug and a filler that erodes on contact with water.

Further, as the hydrophilic base of the outer layer absorbs water, a hydrogel forms in order to retain the water, and the water in the tablet penetrates into the inner layer eroding the erodible filler such that the inner layer substantially becomes a solution state or suspension state. The result is that as the tablet moves from the upper to the lower digestive tract, the tablet has an outer layer that is slowly dissolving, but substantially retaining water, and the inner layer is substantially liquid. The advantage of having a substantially liquid inner layer is that when the outer layer is finally peeled away, the inner layer does not then have to dissolve in order to enable absorption of the drug. When the outer layer completely or partially dissolves, the inner layer is already substantially dissolved and enables rapid absorption of the drug, even in the lower GI tract where there is little water.

Taniguchi *et al.* do not teach or suggest a multi-layer tablet where the core substantially erodes to form a solution state prior to dissolution of the outer layer. As neither Nakashima *et al.* nor Taniguchi *et al.* teach or suggest a multi-layer tablet, there is no suggestion or motivation to combine their teaching. Further, even if combined, the present invention is not

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even remotely suggested. As such, the Examiner is respectfully requested to withdraw the rejection.

### III. CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,



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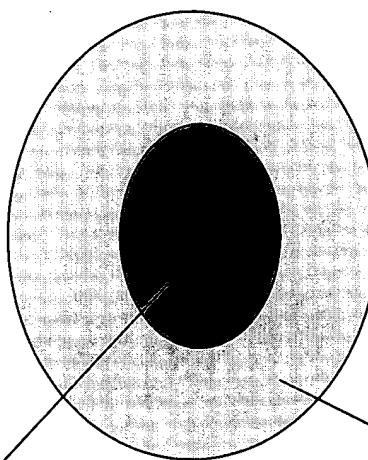
Attachments

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**Exhibit 1**

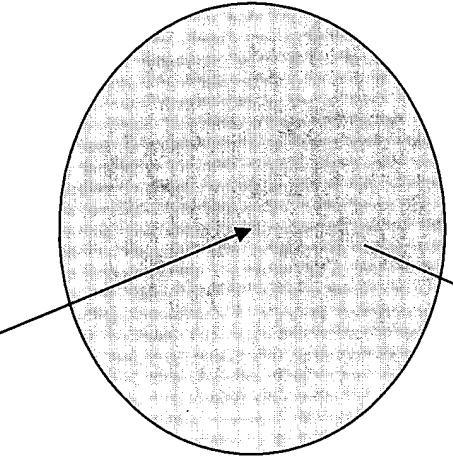
• Invention (A)

Core tablet = active + erodible filler (sucrose, lactulose, malic acid, citric acid, etc.) that erodes 40-90% in GI tract



• Nakashima (B)

Core = center of preparation. Can have reduced amount of hydrogel-forming polymer and more active.



Outer layer = hydrogel (polyethylene oxide, etc.) + hydrophilic base (polyethylene glycol, etc.)

Hydrogel-type preparation containing  
1) Active; 2) additive = hydrophilic base (PEG, PVP, etc.); and 3) hydrogel-forming polymer (polyethylene oxide)

